

8th Grade Science

Assignment 17-3

Name _____

Class Period _____

Date _____

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Read section 17-3. Then, **based on the information in your textbook, answer the following questions :**

1. Heat cannot be measured directly because we cannot measure the kinetic energy of individual molecules and other particles of matter. ***How can changes in temperature be used to measure heat indirectly?***

2. What are the two metric units used to measure heat? _____

3. How many calories of heat are needed to raise the temperature of 5 grams of **water** from 20°C to 30°C? _____

4. How many calories of heat are needed to raise the temperature of 5 grams of **iron** from 20°C to 30°C? _____

5. What is meant by the term specific heat?

6. Which substance will hold more heat energy per gram?

Please explain how you decided on your answer.

a. aluminum

b. copper

c. iron

d. water

7. What device can be used to measure the heat given off in a chemical reaction? _____

8. How much heat would be given off by a chemical reaction that raised the temperature of 150 g of water 10°C? _____

9. What is the metric unit that is equivalent to 1 “food calorie”? _____